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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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21839	7590	12/09/2003	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			WACHSMAN, HAL D	
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ALEXANDRIA, VA 22313-1404			PAPER NUMBER	
			2857	

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method for quantitative estimation of the reliability of a technical system must be shown (i.e. such as in a flow chart) or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The Applicant is respectfully requested to submit in response to this Office Action a complete listing of claims in accordance with 37 C.F.R. 1.121 as well as to re-submit all the specification, embodiments and abstract amendments made in the supplemental preliminary amendment filed 7-31-00 in accordance with the current 37 C.F.R. 1.121 rules. This is because of the new image file wrapper system in which papers need to be scanned in and problems encountered in having amendments filed under the 37 C.F.R. 1.121 rules that existed previously, at the time of filing of the preliminary amendments, entered into the application.

3. The Abstract is objected to because it is greater than 150 words in length and contains purported merits (i.e. "...which is useful, in particular, for complex systems with a multiplicity of components", "The method is suitable, in particular,..."). In addition, in several locations of the Abstract there are reference numerals in parentheses which are not necessary and should be deleted. Appropriate correction is required.

4. The information disclosure statement filed 5-18-00 and 9-12-00 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each reference listed that is not in the English language. Because of the above, the foreign language patent documents as well as a couple of the foreign language non-patent literature documents could not be considered.

5. The listing of references in the specification (see page 5 of the specification) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

6. Page 6, line 1, contains in both brackets and parentheses "... " however exactly what does the "... " represent ? Appropriate explanation and correction is required.

7. One of the amendments to the specification adds the heading "2. Description of the Related Art" to page 1 of the specification" however there was no heading before this heading in the specification numbered as "1." Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of claim 1 states "A method for quantitative estimation of the reliability of a technical system..." the claim though ends with "calculating a first limiting probability distribution... second limiting probability distribution..." without clearly stating what is the quantitative estimation of the reliability. Claim 1, line 7, states "determining first fault rates by statistical random samples" however there is a lack of connection between this step and the steps which follow this as in the steps which follow there is no clear reference to the first fault rates. Claim 1, line 10, cites "...an upper and a lower estimate being specified in each case.." however is this referring to each case of a second fault rate being estimated ? Claim 2, line 3, cites "a mean, in particular a most probable, value" which creates plural ranges, that is we have a generic limitation ("a mean") followed by a narrower limitation ("in particular a most probable, value") which is exemplary language that creates ambiguity in the claim. This same type of problem also occurs in claim 5, step b, with respect to "in particular...", claim 7, step b, with respect to "in particular..." and claim 8, step b, with respect to "in particular". Claim 2, lines 6-7, cite "a mean probability distribution is calculated with the mean values" which does not particularly point out exactly what is this a mean probability distribution of. Claim 3, line 4, cites "first fault rates" which is ambiguous as to whether or not this is referring to the same first fault rates cited in claim 1. Claim 3, lines 4-5, cite "...and distribution

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functions are assumed..” but distribution functions representing what is being referred to here ? Claim 3, lines 6-7, cite “the associated distribution function” however is this associated with a first fault rate ? Claim 4, step a, cites “..each **first** type of fault” which lacks clear antecedent basis.

Claim 5, step a, cites “...with the nominal, minimum and maximum expectation values” is it “...with the nominal, minimum and maximum expectation values respectively” that was intended here ? Claim 6, lines 2-3, cite “...third types of faults...” which is confusing because there was not first and second types of faults referred to before this. Claim 7, step a, cites “..third fault rates..” however there is no antecedent basis in claim 1 for this. In several locations of step a of claim 7 the phrase “if appropriate” is used however the claim does not particularly point out the conditions that make if appropriate to do what is cited. This same type of problem also occurs in claim 9, step c and claim 10, step b. In claim 7, step a, as well as in the preamble and step a of claim 9 are reference numerals which should be deleted. Claim 7, step a, cites “mean estimates of the second fault rates” which lacks antecedent basis. Claim 7, step b, cites “the time interval” however the actual antecedent basis is “prescribable time interval”. The last line of claim 7 refers to “the probability distributions” however exactly which probability distributions are being referred to here ? Claim 8, step a, cites “the random variable characterizing the reliability is a susceptibility to faults, a downtime, costs of standstill, repair and maintenance, or variables derived therefrom” however did the Applicant intend to claim here that the random variable can be either a susceptibility to faults or a downtime or costs of standstill or repair and maintenance, or variables

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derived therefrom ? Claim 8, step b, cites "the fault rates" however is this referring to both the first and second fault rates ? Claim 9 cites "The application of the method in accordance with claim 1..." which as written is confusing because claim 1 is already a method claim which contains steps which can be applied or used for the purpose of the quantitative estimation of the reliability of a technical system as stated in the preamble of claim 1. This same type of problem also occurs in the preamble of claim 10. In the preamble of claim 9 the abbreviations "FMEA" and "FMECA" have not been defined. Claim 9, line 3, cites "or tables (4) derived therefrom" however is this referring to tables derived from either the FMEA tables or FMECA tables ? Claim 9, step a, cites "first, second and third fault rates are distinguished in the tables (4)" however are the first and second fault rates being referred to here the same first and second fault rates already cited in claim 1 ? In addition, the preamble of claim 9 states "in conjunction with FMEA tables, FMECA tables or tables (4)" however step a just refers to the tables (4) and not the other two types of tables. Claim 9, step b, cites "first fault rates" however is this the same first fault rates of claim 1 ? Claim 9, step c, cites "second fault rates" however is this the same second fault rates already referred to in claim 1 ? Claim 9, step d, cites "third fault rates" however is this the same third fault rates already referred to in claim 9, step a ? Claim 10, step a, cites "the first and third types of fault" which lacks clear antecedent basis.

10. The following references are cited as being art of general interest: Draber which discloses a method for determining reliability characteristics for a technical installation, McMann et al. which disclose a reliability model generator, Barnard et al. which disclose

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failure mode and effects analysis, Searles et al. which disclose predictive diagnosing of system reliability problems and Smyth which discloses probability estimates of failure states in dynamic systems.

11. No claims are allowed.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal D Wachsman whose telephone number is 703-305-9788. The examiner can normally be reached on Monday to Friday 7:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 703-308-1677. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Hal D Wachsman
Primary Examiner
Art Unit 2857

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December 6, 2003